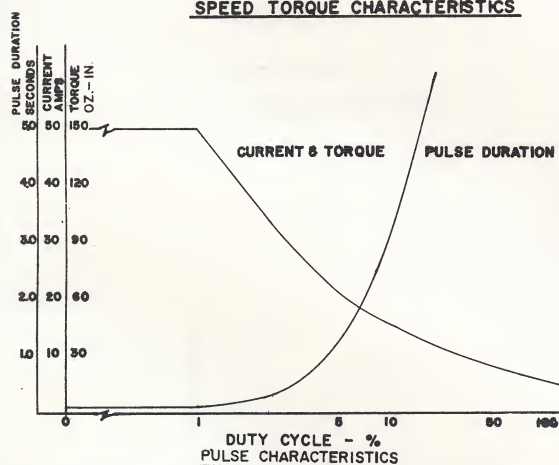
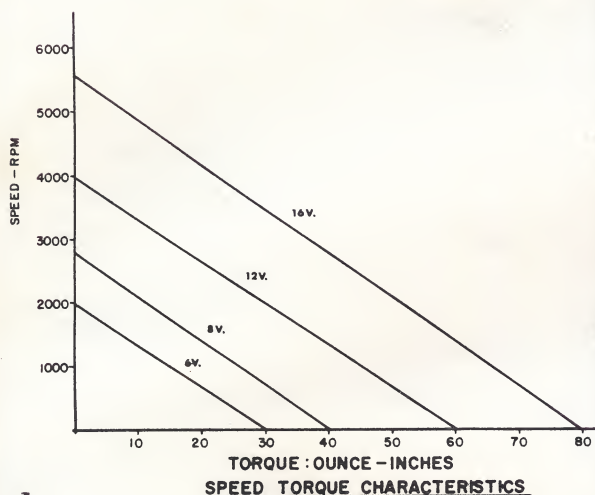
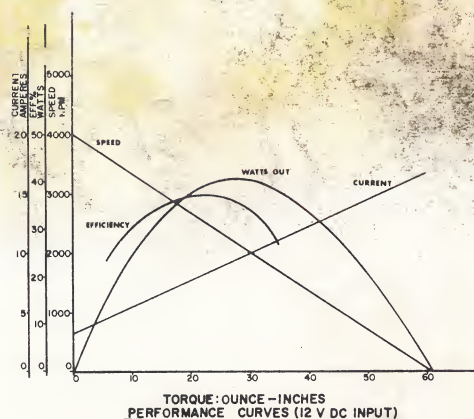


direct drive Printed DC Servo Motor

MODEL 368

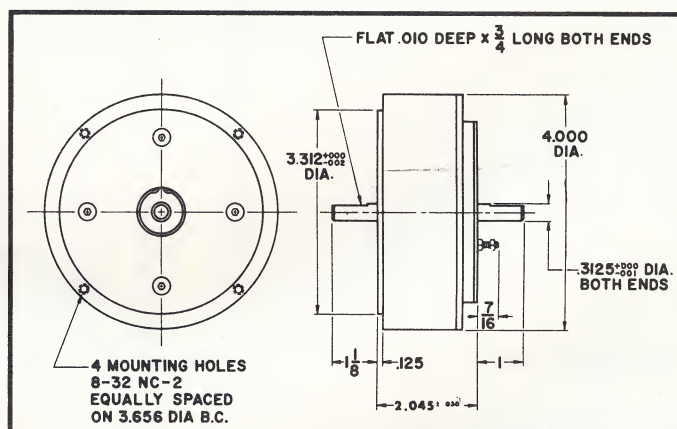


The maximum permissible power input for any given set of operating conditions is determined by the peak temperature of the armature which should not exceed 135°C.

Characteristics:

Rated Torque (continuous duty)	12 ounce-inches
Maximum Pulse Torque Capability (intermittent) (See Duty Cycle Curve for additional details)	150 ounce-inches
Armature Inertia (including hub and shaft)	.004 oz-in-sec ²
Mechanical Time Constant	.028 seconds
Equivalent Series Mechanical Impedance (at constant terminal voltage)	66.7 x 10 ⁻³ krpm/oz-in
Armature Inductance	Less than 100 micro-henries
Rated Speed (continuous duty)	3300 RPM
Rated Current for 70°C rise (continuous)	7.0 amps
Maximum Stall Current (continuous)	5 amps
Rated Voltage	12 volts dc
Power Output at 3300 rpm	30 Watts
Magnetic Field	8 pole Alnico
Number of commutation segments	97
Armature Resistance	.63 ohms
Maximum Friction Torque	1.5 ounce-inches
Back EMF per 1000 RPM	2.22 volts
Average Torque per ampere	3.0 ounce-inches
Weight	3 pounds

Models with shaft modification and internal damping also available.

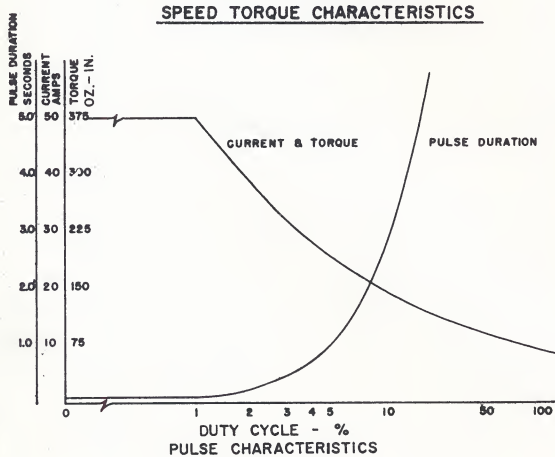
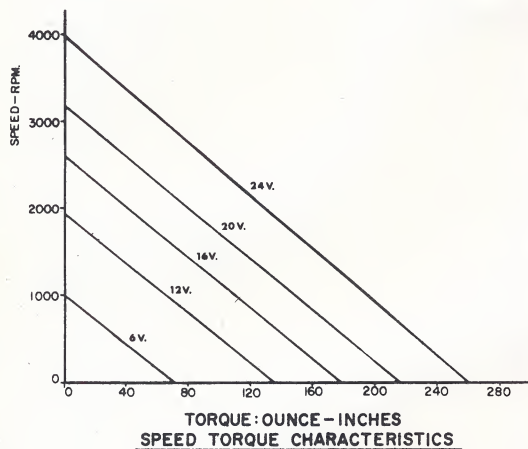
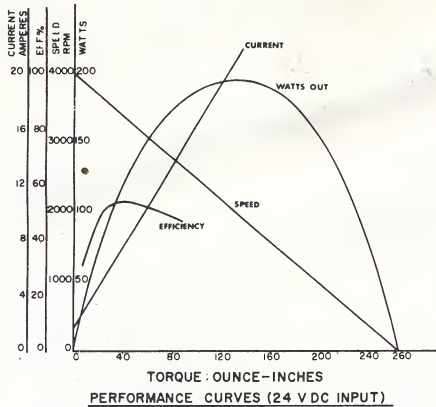


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ENGINEERING, MANUFACTURING AND SALES BY PHOTOCIRCUITS CORPORATION

MODEL 488

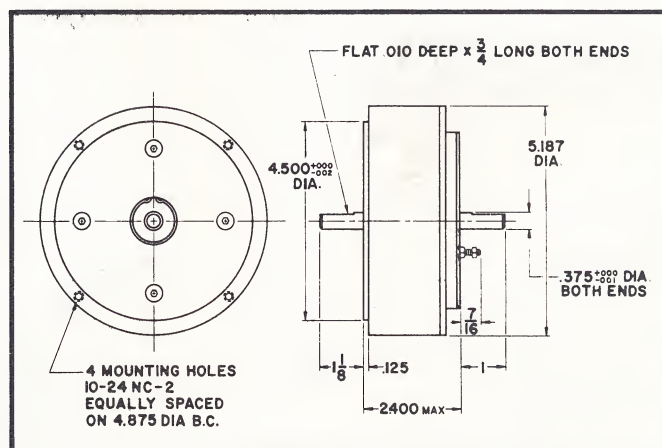


The maximum permissible power input for any given set of operating conditions is determined by the peak temperature of the armature which should not exceed 135°C.

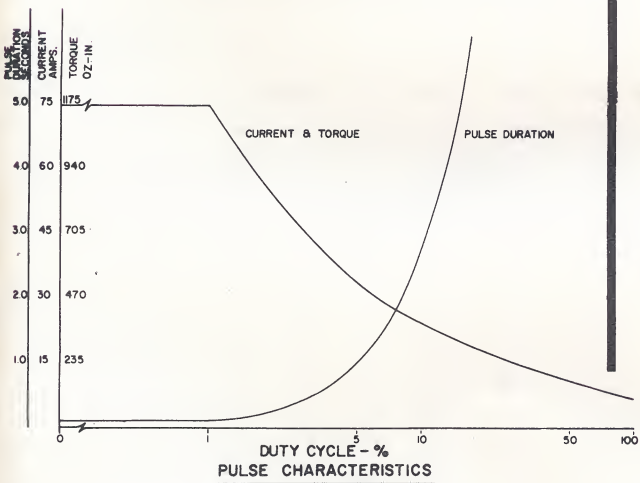
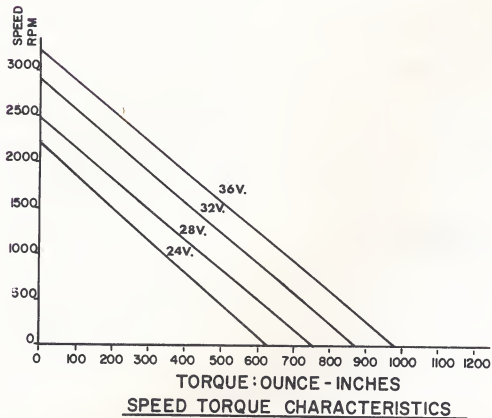
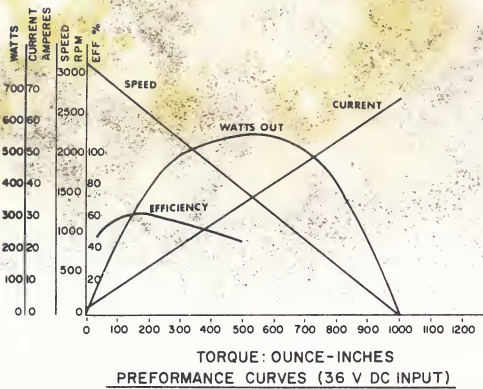
Characteristics:

Rated Torque (continuous duty)	42.5 ounce-inches
Maximum Pulse Torque Capability (intermittent) (See Duty Cycle Curve for additional details)	375 ounce-inches
Armature Inertia (including hub and shaft)	.018 oz-in-sec ²
Mechanical Time Constant	.030 seconds
Equivalent Series Mechanical Impedance (at constant terminal voltage)	15.37×10^{-3} krpm/oz-in.
Armature Inductance	Less than 100 micro-henries
Rated Speed (continuous duty)	3300 RPM
Rated Current for 70°C rise (continuous)	7.5 amps
Maximum Stall Current (continuous)	6 amps
Rated Voltage	24 volts dc
Power Output at 3300 rpm	105 Watts
Magnetic Field	8 pole Alnico
Number of commutation segments	121
Armature Resistance	.600 ohms
Maximum Friction Torque	2.0 ounce-inches
Back EMF per 1000 RPM	5.55 volts
Average Torque per ampere	7.5 ounce-inches
Weight	6.5 pounds

Models with shaft modification and internal damping also available.



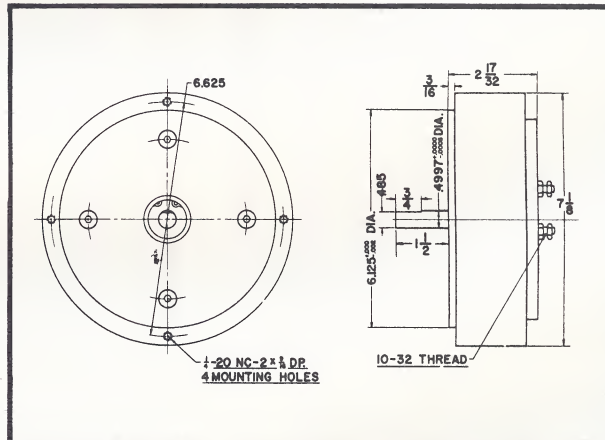
MODEL 668



Characteristics:

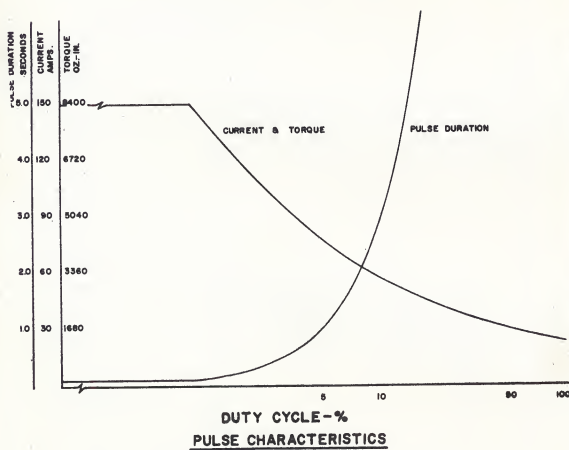
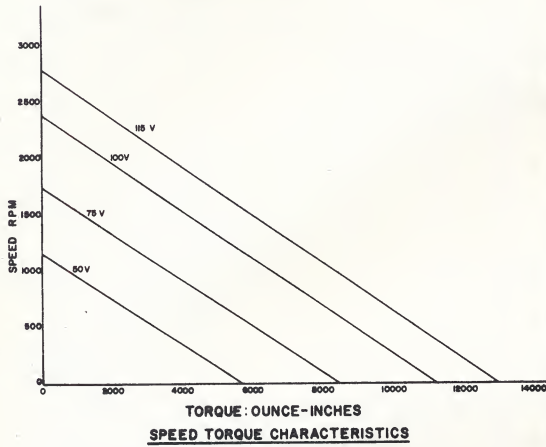
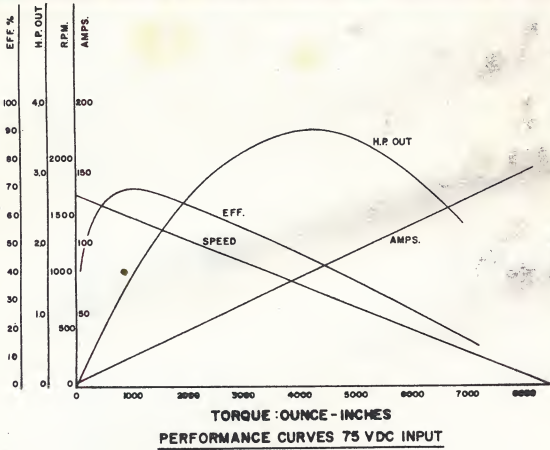
Rated Torque (continuous duty)	140 ounce-inches
Maximum Pulse Torque Capability (intermittent) (See Duty Cycle Curve for additional details)	1175 ounce-inches
Armature Inertia (including hub and shaft)	.088 oz-in-sec ²
Mechanical Time Constant	.0295 seconds
Equivalent Series Mechanical Impedance (at constant terminal voltage)	3.2×10^{-3} krpm/oz-in.
Armature Inductance	Less than 100 micro-henries
Rated Speed (continuous duty)	2700 RPM
Rated Current for 70°C rise (continuous)	10 amps
Maximum Stall Current (continuous)	8 amps
Rated Voltage	36 volts dc
Power Output at 2700 rpm	.375 HP
Magnetic Field	8 pole Alnico
Number of commutation segments	145
Armature Resistance	.40 ohms
Maximum Friction Torque	8 ounce-inches
Back EMF per 1000 RPM	10.0 volts
Average Torque per ampere	13.5 ounce-inches
Weight	13 pounds

Models with shaft modification and internal damping also available.



The maximum permissible power input for any given set of operating conditions is determined by the peak temperature of the armature which should not exceed 135°C .

MODEL 1028

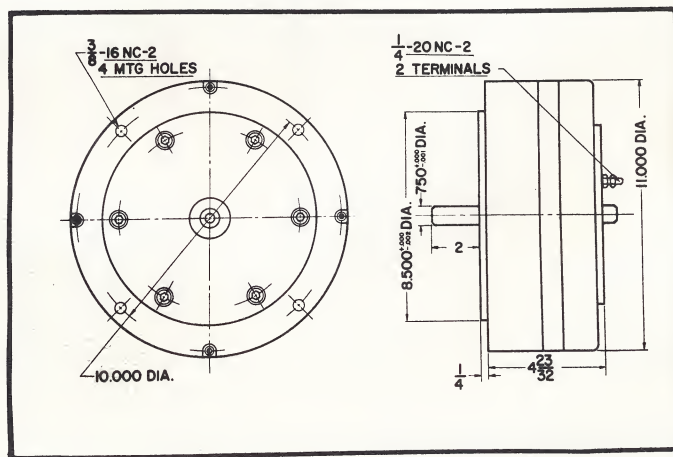


The maximum permissible power input for any given set of operating conditions is determined by the peak temperature of the armature which should not exceed 135°C .

Characteristics:

Rated Torque (continuous duty)	1000 ounce-inches
Maximum Pulse Torque Capability (intermittent) (See Duty Cycle Curve for additional details)	8400 ounce-inches
Armature Inertia (including hub and shaft)	.63 oz-in-sec ²
Mechanical Time Constant	.020 seconds
Mechanical Impedance (at constant terminal voltage)	0.196×10^{-3} krpm/oz-in
Armature Inductance	Less than 200 micro-henries
Rated Speed (continuous duty)	1500 RPM
Rated Current for 70°C rise (continuous)	22 amps
Maximum Stall Current (continuous)	10 amps
Rated Voltage	75 volts dc
Power Output at 1500 RPM	1.5 HP
Magnetic Field	8 pole Alnico
Number of commutation segments	161
Armature Resistance	.30 ohms
Maximum Friction Torque	20 ounce-inches
Back EMF per 1000 RPM	41.4 volts
Average Torque per ampere	56 ounce-inches
Weight	57 pounds

Models with shaft modification and internal damping also available.



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ENGINEERING
MANUFACTURING
AND SALES
BY
Photocircuits



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We hope the enclosed material will give you all the information you need about one of the most unique electro-mechanical devices available today - the PMI Printed Motor.

If you have an application problem which you think the printed motor may solve, call or write and we'll be happy to show you how the motor often offers reduced costs or improved performance.

In addition to our 7 standard production models, we also manufacture special motors to meet specific requirements. In many cases, slight modification of standard models will give the required configuration and performance.

Our newest motor is the Model 258 which is 2.75" in diameter, weighs 15 oz. and has a pulse torque capability of 30 oz.-in. It is designed for use in flight recorders and general aircraft and aerospace applications.

We have also recently introduced a line of bi-directional, transistorized power amplifiers and feedback devices for use with the printed motor in velocity, positioning and intermittent motion applications. If you would be interested in utilizing this apparatus with the motor, please write for details.

Please let us know if there is any additional information or assistance we can give you.

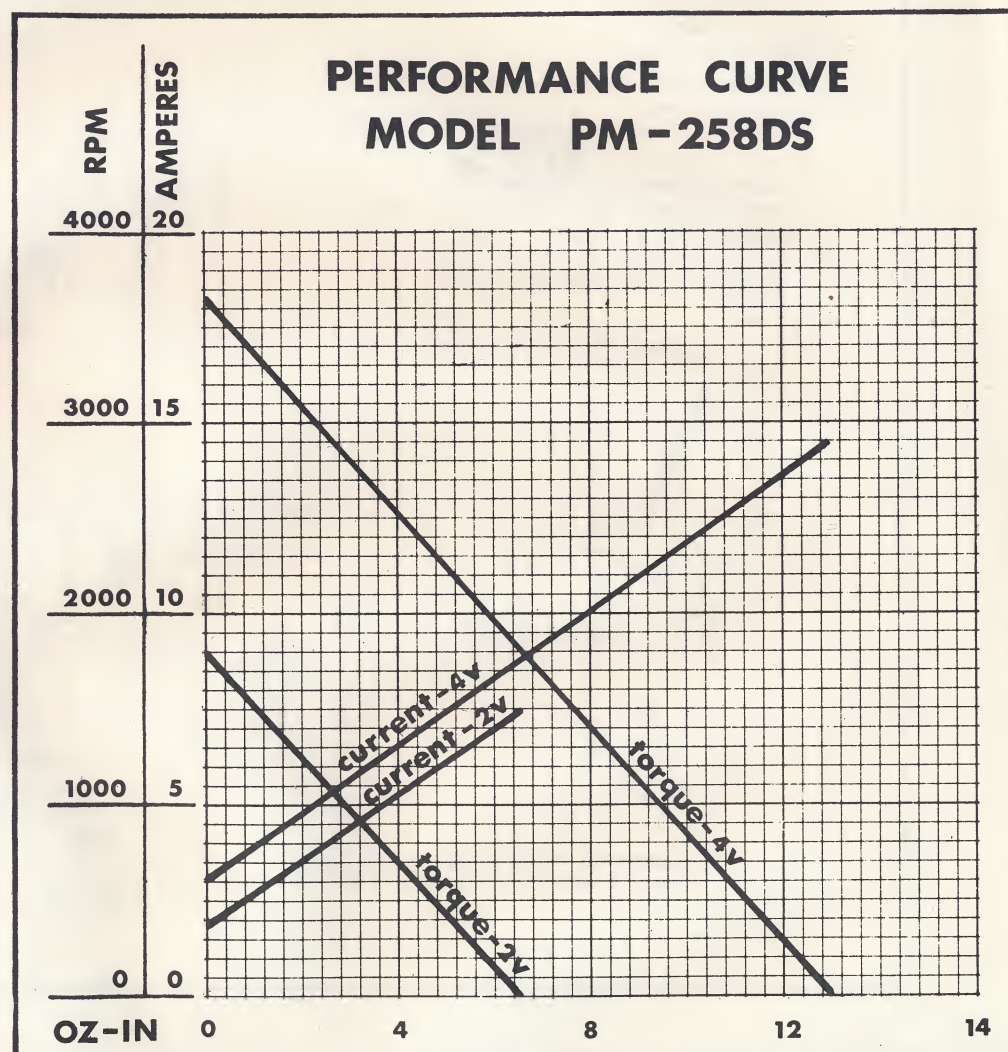
John Calpena
Manager, PMI Division

Printed DC Servo Motor Model 258 DS

Characteristics:

Rated Torque (continuous duty)	3.0 ounce-inches
Maximum Pulse Torque Capability (intermittent) (See Duty Cycle Curve for additional details)	35 ounce- inches
Armature Inertia (including hub and shaft)	.001 oz-in-sec ²
Mechanical Time Constant	.030 seconds
Equivalent Series Mechanical Impedance (at constant terminal voltage)	.285 x 10 ⁻³ krpm/oz-in
Armature Inductance	Less than 100 micro-henries
Rated Speed (continuous duty)	2800 RPM
Rated Current for 70°C rise (continuous)	5 amps
Maximum Stall Current (continuous)	3 amps
Rated Voltage	4 volts dc
Power Output at 2800 rpm	6.25 Watts
Magnetic Field	8 pole Alnico
Number of commutation segments	73
Armature Resistance	.2 ohms
Maximum Friction Torque	.8 ounce-inches
Back EMF per 1000 RPM	.74 volts
Average Torque per ampere	1.0 ounce-inches
Weight (approximate)	17 ounces

Models with shaft modification and internal damping also available.



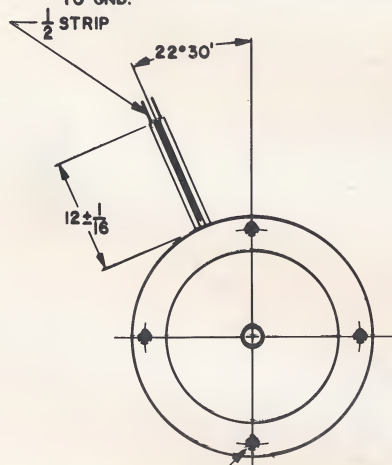
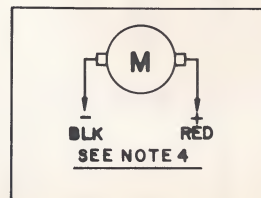
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Engineering, Manufacturing and Sales by Photocircuits Corporation

NOTES:

1. PER PMI STANDARD
2. ASSEMBLY DRAWING NUMBER 9C100
3. MECHANICAL SPEC'S:
 - A SHAFT DIAMETER "A" RUNOUT NOT TO EXCEED
 - B PILOT DIAMETER "B" $\text{Ø} A.003 \text{ T.I.R.}$
 - C MOUNTING SURFACE "S" $\text{Ø} A.005$
 - D SHAFT END PLAY .004 INCH MAXIMUM UNDER A REVERSAL OF 5 POUNDS THRUST.
4. C.W. ROTATION FACING MTG. END OF MOTOR. RED LEAD TO + VOLTAGE, BLACK LEAD TO GND.



4 MOUNTING HOLES-4-40NC-2Bx $\frac{3}{32}$ DEEP
EQUALLY SPACED ON 2.437 DIA B.C.

